Reaction to fire classification report No. 21004D

Owner of the classification report

NUDEC SA
C/ Pintor Vila Cinca, 24-28
08213 Polinyà
Spain

Introduction

This classification report defines the classification assigned to the product ***'NUDEC®PMMA clear'*** in accordance with the procedures given in the standard EN 13501-1:2018: Fire classification of construction products and building elements - Part 1: classification using data from reaction to fire tests.

This classification report consists of 5 pages and may only be used or reproduced in its entirety

1. DETAILS OF CLASSIFIED PRODUCT

a) General

The product ***Nudec®PMMA clear*** is defined as a 'Polymethylmethacrylate sheet'.
Its classification is valid for the following end use application(s):
Used as internal and external use in roofs, walls and ceilings.

b) Product description

This description is based on information given by the sponsor.

	Nominal values (1)
NUDEC®PMMA clear	
Type of product	Light transmitting flat solid polymethylmethacrylate (PMMA) sheet (monolayer).
Manufacturer	NUDEC S.A.
Total thickness (mm)	2,0 – 20,0
Total density PMMA (kg/m³)	1190
Use of fire retardants	No
Colour	Clear
Light transmission (%)	
NUDEC®PMMA clear 2,0 mm	≥ 92
NUDEC®PMMA clear 20,0 mm	≥ 90
Organic pigmentation (weight %)	0
Surface texture	Smooth

(1) Based on the information given by the sponsor

More details (e.g. mounting and fixing) are available in the test report(s) in support of this classification (§2a).

2. TEST REPORTS AND EXAP REPORTS AND TEST RESULTS IN SUPPORT OF THIS CLASSIFICATION

a) Test reports (and EXAP reports)

Name of the laboratory	Name of the sponsor	Test report ref. No. and test date	Test method and date
WFRGENT nv Ghent, Belgium	NUDEC SA	21004A: 08/03/2021	EN ISO 11925-2:2020
WFRGENT nv Ghent, Belgium	NUDEC SA	21004B: 19/03/2021 & 01/04/2021	EN ISO 11925-2:2020
WFRGENT nv Ghent, Belgium	NUDEC SA	21004C	EXAP according to CEN/TS 15117 (August 2005)

b) Test results

Official test results used for the classification

Test method	Parameter	Number of tests	Results		Criteria for Class E	
			Continuous parameters Mean	Compliance parameters	Continuous parameters	Compliance parameters
EN ISO 11925-2 (*) (1) 30 s (**) flame application:						
Surface exposure	$F_s \leq 150$ mm	6	(-)	Yes	(-)	Yes
- front side	Ignition filter paper		(-)	No	(-)	No
Edge exposure	$F_s \leq 150$ mm	6	(-)	Yes	(-)	Yes
- mid point 1,5 mm behind surface	Ignition filter paper		(-)	No	(-)	No
EN ISO 11925-2 (*) (2) 15 s flame application:						
Surface exposure	Fs ≤ 150 mm	6	(-)	Yes	(-)	Yes
- front side	Ignition filter paper		(-)	No	(-)	No
Edge exposure	Fs ≤ 150 mm	6	(-)	Yes	(-)	Yes
- mid point 1,5 mm behind surface	Ignition filter paper		(-)	No	(-)	No

(*) The material melted but didn't pull away from the pilot burner.
(**) According to EGOLF RECOMMENDATION 002-2016 "a material which passes the EN ISO 11925-2 test with flame exposure time of 30 s shall be considered as passing the test with a 15 s flame exposure time, when this latter exposure time is required to be examined according to EN 13501-1:2007+A1:2009 §11.3".
(1) Based on the results obtained in test report No. 21004A: NUDEC®PMMA clear 20 mm
(2) Based on the results obtained in test report No. 21004B: NUDEC®PMMA clear 2 mm.

(-) Not applicable.

3. CLASSIFICATION AND FIELD OF APPLICATION

a) Reference of classification

This classification has been carried out in accordance with EN 13501-1:2018.

b) Classification

The product ***NUDEC®PMMA clear*** in relation to its reaction to fire behavior is classified as:

Fire behavior
E

c) Field of application

This classification for the product as described in §1b, is valid for the following end use applications:

- Product as such

This extended application is valid for the following product parameters:

- Nominal thickness: 2 mm – 20 mm
- Nominal density: 1190 kg/m³
- Colour: Clear
- Light transmission NUDEC®PMMA 2 mm: ≥ 92 %
- Light transmission NUDEC®PMMA 20 mm: ≥ 90 %
- Organic pigmentation: 0 %
- Surface texture: Smooth
- No use of fire retardants

4. RESTRICTIONS

At the time the standard EN 13501-1:2018 was published, no decision was made concerning the duration of validity of a classification report.
Provisions of Regulation (EU) 305/2011, commonly known as the Construction Products Regulation (CPR), prevail over any conflicting provisions in the harmonized standards and technical specifications.

5. WARNING

This classification report does not represent type approval or certification of the product.
According to the information mentioned by the sponsor on the technical information sheet there was no product standard for CE marking available at the time the classification report for the tested material/product was drafted.
When such a product standard is published, this report may be submitted again to the laboratory to evaluate the adequacy of the report for CE marking.

PREPARED BY	APPROVED BY
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NUDEC®PMMA
Food Contact Compliance - Europe

To whom it may concern,

We, NUDEC S. A., hereby confirm that our NUDEC®PMMA Clear complies the requirements of the European Community regulations for plastics used in food-contact applications (EU) Nº 1935/2004 and 10/2011:

- It has been produced according to the good manufacturing practices included in the EU Regulation 2023/2006.
- It complies with the organoleptic requirements included in the EU Regulation 1935/2004.
- All the monomers used by our PMMA resin suppliers in the production are currently included in the EU Regulation 10/2011.
- Migration tests for NUDEC®PMMA up to 12 mm thickness (Regulation 10/2011):

Test	Standard	Units	Limit	Value	Conclusion
Global migration (1)					
Simulant A	UNE-EN 1186-1 UNE-EN 1186-3	mg/dm²	10	< 3,4	OK
Simulant B	UNE-EN 1186-1 UNE-EN 1186-3	mg/dm²	10	< 3,6	OK
Simulant D2 (Iso-octane)	UNE-EN 1186-1 UNE-EN 1186-2	mg/dm²	10	< 3,4	OK
Specific migration (2)					
Methyl methacrylate (Nº CAS: 80-62-6)	UNE-EN 13130-1	mg/kg	6	< 5,0	OK
Acrylic acid ehyl ester (Nº CAS: 140-88-5)	UNE-EN 13130-1	mg/kg	6	< 0,36	OK
Specific migration (3)					
2-(2'-Hydroxy-5'-methylphenyl)bensotriazole	UNE-EN 13130-1	mg/kg	30	< 1,0	OK

To establish the conformity of the specimen it has been used the following ratio between food contact surface and volume:

(1) *10,0 dm²/kg*
(2) *6,0 dm²/kg*
(3) *7,0 dm²/kg*

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USE CONDITIONS:

According to the results, the product above mentioned complies with the global and specific migration limits of the indicated substances stated in Regulation 10/2011, for contact with all kind of foodstuffs, for any long term storage of repeated use (including heating up to 70 ºC for up to 2 h, or heating up to 100 ºC for up to 15 min) at room temperature or below.

In cases where the conditions of use are beyond our control, we do not assume any responsibility for any use of the above materials. Therefore, customers take all responsibility and shall not disclaim any liabilities. The customer must ascertain whether the use of our products is safe and lawful in their intended applications. We do not guarantee that the status of the above products will remain unchanged if there exists the possibility of a change in law or regulation that is beyond our control.

Yours faithfully,

Elisabet Suñer
R+D+i Technician

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1. Identification of the substance / preparation and of the company / undertaking.

Trade name	NUDEC®PMMA
Name of the product	Polymethylmethacrylate Sheets
Product Use	General application in the construction sector (enclosures, glassing, covers…), thermoforming.
Responsible for placing on the market	
Trade name of the firm	See above.
Emergency number	Emergency call: (+34) 93.713.27.00.
Official advisory body	National Institute of Toxicology (Madrid, Spain): (+34) 91.562.04.20. Danish Poison Center (Giftlinjen): +45 8212 1212

2. Hazards Identification.

This product has not been classified as a dangerous substance or preparation according to the Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Label elements	Not applicable
Symptoms related to use	
Inhalation	If heated to high temperatures during the heating process, the product may form vapors or fumes which may cause irritation of respiratory tract.
Skin contact	The prolonged contact with skin does not irritate. In normal process' conditions, the material can be heated at high temperature; in contact with hot material, may cause severe thermal burns.
Eye contact	Solid form or fine dust of the product may cause irritation to ocular mucous or ocular lesions.
Ingestion	Ingestion during handling is not likely. The ingestion of small quantities does not produce noxious effects. It may cause an obstruction in case of ingestion. Seek medical advice immediately.
Adverse environmental effects	This product is not soluble in water. Because of its structure, the product should not be dangerous for aquatic life. Non biodegradable.
Adverse physicochemical effects	Combustible if exposed to flames.

3. Composition/information on ingredients.

Chemical Name	Polymethylmethacrylate. Acrylic Copolymer based on methylmethacrylate.
Composition	≥ 98 %.
CAS number	9010-88-2.
EINECS O ELINCS number	The product is a polymer, following the European Regulation; registration on the EINECS (European Inventory of Existing Commercial Chemical Substances) inventory is not required.

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Substances presenting a health hazard	The product is not composed by dangerous substances or dangerous preparations according to the Regulation (EC) No 1272/2008.

4. First-aid measures.

Route of exposure

Inhalation	In case of inhalation of gases during the product combustion, move patient into fresh air. Seek medical attention.
Skin contact	In case of burns with molten material, immediately immerse in cold water. Wash immediately with soap and abundant water. In case of material adhering to skin, do not peel material from skin, obtain medical attention and treat the injury as a thermal burn. Seek medical attention.
Eye contact	In case of eye contact, wash immediately with abundant water. After the initial washing, remove the eventual contact lenses and go on washing affected eyes for at least 15 minutes under running water with eyelids held open. Seek medical attention.
Ingestion	Ingestion during handling is not likely. Remove material from mouth. If swallowed, do not induce vomiting: seek medical advice immediately.

5. Fire-fighting measures.

Fire-class regulation	A: Solid materials fire, principally of organic nature, that burn with incandescence.
Technical measures	Stop the fire spreading. Call the fire brigade immediately. Evacuate non-essential personnel. Protective clothing, goggles and self-contained breathing equipment should be made available for firemen.

Extinguishing media

Suitable	Foam. Water sprays (mist). Chemical Powder ABC. Carbon dioxide (CO_2)
Unsuitable	Water jets (stick jets).

Dangerous decomposition products	The combustion of the product forms toxic, irritant and flammable vapors, which basically contains dangerous decomposition products: methylmethacrylate, ethylacrylate, carbon dioxide (CO_2) and carbon monoxide (CO).
Special protective equipment	In case of fire-fighting or risk of exposure to vapors or fumes, wear suitable breathing equipment.

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6. Accidental release measures.

Personal precautions

Risk of slipping on smooth surfaces.

Environmental protection precautions

This product is not soluble in water. Because of its structure, the product should not be dangerous for aquatic life. Non biodegradable. Refer to a specialist for waste disposal in a safe manner in accordance with local or national regulations.

Cleaning methods

Clean and collect the released product by hand or using vacuum equipments.

7. Handling and storage.

Handling

The sheets may be heavy and difficult to handle. They must be carefully handled (do not drag) or using vacuum equipment. Avoid contact with hot or melted material.

Storage

The product should be stored in closed premises that guarantee normal environmental conditions. Store away heating and/or ignition sources.

Specific uses

No information available.

8. Exposure controls / personal protection

Occupational exposure limit

Particules (respirable dust particules) E (2008): VLA-ED: 3 mg/m^3.
Particules (inhalable dust particules) E (2008): VLA-ED: 10 mg/m^3.

The following values apply to substances which may be evolved during thermal processing:

Substance	CAS number	VLA-ED (mg/m^3)
Methylmethacrylate	0080-62-6	208
Ethylacrylate	0140-88-5	21

Occupational exposure controls

Personal protection

In case of Risk of over exposure to dust, vapor or fumes (during product processing), wear suitable respirator with filter (recommended filter type: P1, EN-143)

Hands protection

The sharpened edges may cause cuts. Wear industrial gloves, EN-388.

Eyes protection

Wear goggles with lateral protections, EN-166.

Body protection

Overall (EN-340).

Hygienic measures

During the operation process is forbidden eating, drinking and smoking.

Environmental exposure controls

Not regulated.

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9. Physical and chemical properties.

General information.

Aspect

Physical state	Solid.
Color	Transparent or colored.
Odour	Odourless.

Important health, safety and environmental information

Ignition point (ºC)	> 450
Relative density	1,19
Solubility	Attacked by chlorinated aliphatic hydrocarbons, aromatic hydrocarbons, ketones, alcohols, ether and esters.
Solubility in water	Insoluble.

Other information

Melting point (ºC)	> 200
Softening point (ºC)	90 - 120
Auto-ignition temperature (ºC):	>400
Thermal **decomposition** (ºC)	>280

10. Stability and reactivity.

The product is stable under normal operating conditions (storage, handling and use). The thermal decomposition starts, approximately, at 280 ºC.

Conditions to avoid	Avoid proximity or contact with flames. Avoid overheating the product. Do not heat to temperatures exceeding the thermal decomposition.
Materials to avoid	Does not observe dangerous reactions.
Hazardous decomposition products	The combustion of the product forms a dark and dense fume which contains dangerous decomposition products: carbon dioxide (CO_2), carbon monoxide (CO) and hydrocarbons.

11. Toxicological information.

This product has not been classified as a dangerous substance or preparation according to the Regulation (EC) No 1272/2008. Handling the product in the correct way, it does not have negative repercussions on health, according to the experiences and information which we have.

During the heating process may cause irritation of the skin, eyes and respiratory system.

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12. Ecological information.

Ecotoxicity	Because of its low solubility, the product should not be dangerous for aquatic life.
Mobility	Because of its physic-chemical properties, the product has low soil mobility. The product has a density up to 1 g/cm^3, it sinks in water. Because of its low solubility, the product should not be dangerous for aquatic life.
Persistence and degradability	This product is slowly biodegradable.
Bioaccumulative potential	Potential bioaccumulation of the product in environment is slow.

13. Disposal considerations.

Where possible, it is preferred recycling than destruction or incineration. The product is good for recycling. The condition to recycle is the collection and reutilization of exactly the same material. The elimination must be according to local or national regulations.

Industrial waste number EC: 070213: plastics.

14. Transport information.

Road (ADR) / Rail (RID)	Not restricted for transport.
UN number	Not applicable.
Marine (IMO)	Not restricted for transport.
Air Transport (ICAO/IATA)	Not restricted for transport.

15. Regulatory information.

Labelling and Classification CE	Not required.
Symbol(s) EC	Not classified according to Regulation (EC) No 1272/2008.
Wassergefährdungsklasse	NWG: non-hazardous to waters.

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16. Other information.

All issues of this Material Safety Data Sheet have been modified and/or further details conform to the Regulation EU 1907/2006/EEC (REACH).

The information contained is based on our knowledge of the product, at the date of publishing and it is given quite sincerely. Users are advised of possible additional hazards when the product is used in applications for which it was not intended. This sheet shall only be used and reproduced for prevention and security purposes. The references to legislative, regulatory and codes of practice documents cannot be considered as exhaustive. It is the responsibility of the person receiving the product to refer to the totality of the official documents concerning the use, the possession and the handling of the product. It is also the responsibility of the handlers of the product to pass on to any subsequent persons who will come into contact with the product. (usage, storage, cleaning of containers, other processes) The totality of the information contained within this safety data sheet and necessary for safety at work, the protection of health and the protection of environment.

NUDEC®

Notices and signs

Lamps and ceiling lights

Noise barriers

Toys

Gifts and decorations

Display cabinets

Glazing

Television, computer and monitor filters

Displays and other publicity elements

NUDEC® PMMA

Polymethylmethacrylate sheets

- Excellent transparency, with a 92% light transmission
- Bright and colourless
- High rigidity
- Resistant to outside weather
- Elevated hardness
- They can be moulded
- Intermediate mechanical strength
- The surface is suitable for buffing

NUDEC® PMMA

Properties

Dimensional stability to heat

Prolonged exposure to heat must not exceed 80°C.

Cracking under pressure

The appearance of cracking essentially depends on the joint action of a chemical agent, temperature, applied stress and the time during which these are applied.

Ageing

NUDEC®PMMA sheets show excellent stability to outside weather conditions, including UV radiation. Even after years of exposure to sunlight, the sheets do not show any substantial variations in their properties.
When used in exterior applications, the protective film must be removed immediately, since exposure to sunlight can cause permanent adhesion to the sheet.

STANDARD SPECIFICATIONS FOR PMMA RESIN

	CODE	UNIT	VALUE
PHYSICAL			
Density	ISO 1183	g/cm^3	1.19
MECHANICAL			
Tensile strength @ yield	ISO 527	MPa	(*)
Tensile strength @ breakage	ISO 527	MPa	83
Elongation @ breakage	ISO 527	%	5
Tensile modulus of Elasticity	ISO 527	MPa	3,200
Flexural strength	ISO 178	MPa	120
Charpy impact strength notched	ISO 179	kJ/m^2	(*)
Charpy impact strength un-notched	ISO 179	kJ/m^2	20
Rockwell hardness M/R scale			92/ (*)
Ball pressure hardness	ISO 2039	MPa	185
OPTICAL			
Light transmission	ASTM D-1003	%	92
Refractive index	ASTM D-542		1.489
THERMAL			
Maximum Service temperature		°C	80
VICAT Softening temperature (10 N)	ISO 306	°C	116
VICAT Softening temperature (50 N)	ISO 306	°C	107
Heat deflection temperature, HDT A (1.8 MPa)	ISO 75-2	°C	97
Heat deflection temperature HDT B (0.45 MPa)	ISO 75-2	°C	101
Coefficient of linear thermal expansion	ISO 75-2	$x10^{-5}/°C$	7

These data correspond to raw material values.

(*) Non-applicable

CHEMICAL RESISTANCE

CHEMICAL PRODUCT	BEHAVIOUR		
	SATISFACTORY	REGULAR	UNSATISFACTORY
Mineral oil	X		
Vegetable oil	X		
Acetone			X
Acetic acid			X
Water	X		
Turpentine		X	
Ammonia		X	
Detergents		X	
Ethanol			X
Petrol	X		
Glycerine	X		
Methanol			X
Toluene			X

REACTION TO FIRE

COUNTRY	CODE	CLASSIFICATION
GREAT BRITAIN	BS 476: Part 7	3
GERMANY	DIN 4102-1	B2
FRANCE	NFP 92-507	M4

A NUDEC®PMMA safety file is available for any additional type of query.

Specifications valid for clear panels.

Handling

Cleaning

A solution of water and neutral detergent may be employed. They should always be cleaned and dried with a soft cloth with very little pressure.

Cutting

Important!
Do not remove the protective film from the sheets before cutting, and once this has been accomplished, blowing or suction should be employed to eliminate any chips.
Manual cutting
Cutting should always be carried out with a fine-blade saw, with the sheet firmly held in place to prevent vibration. The teeth should be well-sharpened.
Cutting with a blade
When cutting with a blade, this should be passed several times in order to achieve the desired depth (this should be a minimum of half the thickness), employing a uniform pressure.
The sheet must be firmly secured to prevent sliding. Afterwards, the sheet should be placed on a flat surface and gentle pressure applied until it breaks. Sandpaper may be employed to eliminate any burrs.
Sawing
Cutting recommendations for NUDEC®PMMA sheets
- Disc diameter: 350 - 400 mm
- Number of teeth: 84 - 106
- Rotation speed: 2,800 - 4,500 rpm
- Advance speed: 12 - 18 m/min

Type of teeth
Alternate teeth or combined straight and trapezoid.
The sheet must be firmly secured to prevent them rising up and causing cracks when the disc passes.
The translation speed should be as uniform as possible.
The disc must be regularly sharpened.

Polishing

NUDEC®PMMA sheets can be polished using a mechanical buffer at a speed of 1,500 rpm and avoiding surface over-heating. Polishing requires a balance between rotation speed and applied pressure.
Final polishing is achieved with soft cloth or flannel discs at high speed (4,000 rpm), with buffing paste.
Edges may be polished using a high temperature air jet (200 to 300 °C)
.

Drilling

Metal and wood drill bits may be employed.
The larger the diameter, the lower the speed. Water or air can be used for cooling.
A hole diameter that is approximately 1.5 mm larger than that of the screw to be used should be drilled in order to take sheet dilation into account.
The sheet must be firmly secured to prevent breaking.

Recommended drill speeds:

Diameter (mm)	rpm
1.6	7,000
6.4	1,800
12.7	900

Gluing

NUDEC®PMMA sheets can be glued together to form a transparent joint. Depending on the application and surfaces to be glued together, various types of glue available on the market and suitable for methacrylate sheets can be employed, such as those containing dichloromethane.
The following should be taken into consideration when selecting an adhesive:
- Chemical compatibility with the sheets
- Aesthetics of the finished joint
- Dilation and contraction with temperature changes
- Fragility, rigidity and flexibility
- Alterability with respect to outside weather conditions, where applicable
- Duration and useful lifetime
- Adhesive strength (adherence to the plastic)
- Final usage requirements

Important!
To prevent air bubbles, the glue should be allowed to stand for a while before application, until none can be seen.
It is recommended that:
The surfaces to be glued are clean and degreased.
The glued parts must be allowed to dry for twenty-four hours so that maximum hardness is achieved.

Thermoforming

NUDEC®PMMA sheets are easily thermoformable in any oven with air circulation. The sheet temperature must exceed 140 °C.
If the sheets have been stored in a damp environment, it is preferable for them to be previously dried for a few hours (two to four) at an approximate temperature of between 80 to 85 °C in order to avoid thermoforming problems. To achieve a good finish, the mould employed can also be heated to between 50 and 60 °C. An excessive mould temperature could harm the sheets.
All NUDEC products use film to protect the surface from possible damage during production and transport. This protective film is not prepared to withstand high temperatures and must be removed prior to thermoforming or hot-bending.

Bending

NUDEC®PMMA sheet bending requires a bending template, together with a heating element or incandescent wire. The area to be bent must be completely and uniformly heated.
We recommend that the smallest radius be twice the sheet thickness. It is a good idea to cool the part of the sheet that is closest to the bending line.
All NUDEC products use film to protect the surface from possible damage during production and transport. This protective film is not prepared to withstand high temperatures and must be removed prior to thermoforming or hot-bending.

Decoration

Silk-screening
NUDEC®PMMA sheets can be silk-screened just like other materials. Acrylic-based and two-component inks are recommended: epoxy or polyurethane.
Painting
They can also be painted by normal spray methods. No prior surface treatment is necessary, apart from cleaning. The paint that is employed must be specially indicated by the manufacturer as suitable for use on methyl polymethacrylate. In general, it is recommended that they contain an acrylic resin base with low-aggressivity solvents.
They can also be vacuum metallised.
The print film should be removed just prior to printing to prevent the surface from damage.

NUDEC® PMMA

Polymethylmethacrylate - acrylic sheets

Properties

Specifications

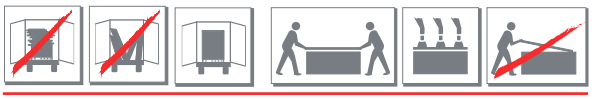
Handling

Transport

Storage

Responsibility clause

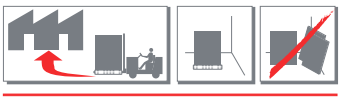
- NUDEC, S. A. supplies its products in accordance with the indications prepared by the purchaser with respect to the ordered material and quality. In this sense, NUDEC, S. A. provides its customers with all available professional and technical information deriving from its product analyses.
- Once the material has been delivered by NUDEC, S. A., the purchaser is fully responsible for all subsequent application, treatment, use and/or utilisation of this same material , whether by the actual purchaser or by third parties, with complete indemnity for NUDEC, S. A.
- The purchaser is wholly and soley responsible for carrying all tests or analyses, of any nature, which are required to verify that the product can be effectively applied for the purpose sought by the purchaser or by any third parties to whom the purchaser supplies the product or for whom its is installed.
- NUDEC, S. A. is exempt from any responsibility deriving from any inadequate or defective application of its products by the purchaser or subsequent third parties, and only accepts damages deriving directly from possible defects of its products at origin.



Transport

Dirt and sharp angles may damage the surface in the case of friction.

- During transport, stable, flat pallets should always be used and the sheets secured to prevent sliding.
- The sheets must not be allowed to slide over each other during loading and unloading operations.
- They should be lifted by hand without any dragging or by suction-cup lifting equipment.



Storage

An incorrect storage position can lead to permanent deformation.

- The sheets should be stored in closed premises that guarantee normal environmental conditions.
- The sheets should be stored one on top of the other on flat horizontal surfaces and fully supported over their total area.
- The topmost panel should be covered with a sheet of polyethylene or cardboard etc.
- NUDEC®PMMA sheets must not be stored in direct sunlight or under conditions of high humidity and/or temperature as this can have a negative effect of protective film adhesion.

NUDEC®

Pintor Vila Cinca, 24-28
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Fax (+34) 93.713.19.36
nudec@nudec.es
www.nudec-plastic.com

02/2012

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REACH SVHC

To whom it may concern,

We hereby certify that the products below produced by NUDEC, S. A.:

- NUDEC®PET
- NUDEC®PETg
- NUDEC®PMMA
- NUDEC®PMMA HI
- NUDEC®PS
- NUDEC®SAN

comply with the regulation 1907/2006/EC (REACH). Therefore, our products do not contain more than 0.1% (w/w) of any Substance of High Concern (SVHC), as published on the ECHA list on 10th July 2022.

In the case of NUDEC®PC, it may contain traces as residual impurity of Bisphenol-A (CAS nº: 80-05-7) upon 100 ppm. Concerning the rest of the Substance of High Concern (SVHC) included in the above mentioned list, NUDEC®PC complies with the REACH regulation, as it does not contain more than 0,1% (w/w) of these substances.

In cases where the conditions of use are beyond our control, we do not assume any responsibility for any use of the above materials. Therefore, customers take all responsibility and shall not disclaim any liabilities. The customer must ascertain whether the use of our products is safe and lawful in their intended applications. We do not guarantee that the status of the above products will remain unchanged if there exists the possibility of a change in law or regulation that is beyond our control.

Yours faithfully,

Javier García Monteagudo
Communication & Environment Manager

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RoHS

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- NUDEC®PC
- NUDEC®PMMA
- NUDEC®PMMA HI
- NUDEC®PS
- NUDEC®SAN

are not intentionally manufactured with the following substances listed in the EU directive 2011/65/EC (RoHS – amended by Commission Delegated Directive (EU) 2015/863):

- Heavy metals: Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr VI)
- Polybrominated biphenyles (PBB)
- Polybrominated diphenyle ethers (PBDE)
- Bis(2-ethylhexyl) phthalate (DEHP)
- Butyl benzyl phthalate (BBP)
- Dibutyl phthalate (DBP)
- Diisobutyl phthalate (DIBP)

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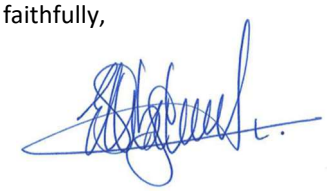
Yours faithfully,



Elisabet Suñer
R+D+i Department